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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,859	10/27/2006	Michael Naroditsky	26/804	3792

7590
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9003 Florin Way
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05/07/2007

EXAMINER

BARBEE, MANUEL L

ART UNIT	PAPER NUMBER
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2857

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/577,859

Applicant(s)

NARODITSKY, MICHAEL

Examiner

Manuel L. Barbee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-9 and 12 is/are rejected.
- 7) ☒ Claim(s) 5, 10 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 April 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to because the shading in Figures 2 and 3 appears to be blocking out other parts of the drawings. For example in Figure 2, the reference sign "m_n", referred to in the specification on page 4, line 23, cannot be seen if it is included in Figure 2. Certain elements of Figure 3 are difficult to see. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in

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compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 6 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6 and 12 refer to equation 9 found in the specification. Where possible, claims are to be complete in themselves (2173.05(s)). The equation should be included in the claim and the terms of the equation should be defined.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 4,293,046 to Van Steenwyk (Steenwyk).

With regard to a fluid rotor angular accelerometer, as shown in claim 1, Steenwyk teaches an angular accelerometer implemented with a fluid rotor rate sensor that outputs a periodic signal (col. 3, line 64 - col. 4, line 44). With regard to means to extract the body azimuthal signal from the periodic signal, as shown in claim 1, Steenwyk teaches determining azimuthal direction from the accelerometer signal (col. 4, line 45 - col. 5, line 21).

With regard to sensing a Coriolis force, as shown in claim 2, Steenwyk teaches sensing motion (col. 3, line 64 - col. 4, line 20).

With regard to a fluid rotor angular accelerometer and rotating the accelerometer relative to the body, as shown in claim 7, Steenwyk teaches an angular accelerometer implemented with a fluid rotor rate sensor that outputs a periodic signal (col. 3, line 64 - col. 4, line 44). With regard to using the periodic output signal to determine the azimuth of the body, as shown in claim 7, Steenwyk teaches determining azimuthal direction from the accelerometer signal (col. 4, line 45 - col. 5, line 21).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steenwyk in view of US Patent No. 4,520,669 to Rider (Rider).

Steenwyk teaches all the limitations of claim 2 upon which claim 3 depends and claim 7 upon which claims 8 and 9 depend. Steenwyk does not teach a piezo-ceramic membrane for the sensing element, as shown in claims 3, 8 and 9. Rider teaches a piezoceramic material that experiences a force from a spin and outputs a periodic voltage signal (col. 4, line 56 - col. 5, line 27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the angular accelerometer, as taught by Steenwyk, to include a piezoceramic material, as taught by Rider, because then a well known material would have been used to sense acceleration (col. 1, lines 43-52).

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Steenwyk in view of US Patent No. 4,193,570 to Hoffman et al. (Hoffman).

Steenwyk teaches all the limitations of claim 1 upon which claim 4 depends. Steenwyk does not teach a synchronization pulse, as shown in claim 4. Hoffman teaches zero-crossover sync pulses (col. 8, lines 7-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the angular accelerometer, as taught by Steenwyk, to include a sync pulse, as taught by Hoffman, because then the accelerometer signals would have been sensed accurately and in synchronization with rotation (col. 8, lines 7-20).

Allowable Subject Matter

10. Claims 5, 10 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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11. Claims 6 and 12 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manuel L. Barbee whose telephone number is 571-272-2212. The examiner can normally be reached on Monday-Friday from 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Manuel L. Barbee
Examiner
Art Unit 2857

mlb
May 2, 2007